

IAP12 Rec'd FCT/PTO 27 APR 2006

SEQUENCE LISTING

<110> KANEKA CORPORATION

<120> NOVEL ACETOACETYL-CoA REDUCTASE AND PROCESS FOR PRODUCING OPTICALLY ACTIVE ALCOHOL

<130> BO30435WO01

<150> JP2003-380987

<151> 2003-11-11

<160> 15

<170> PatentIn version 3.1

<210> 1

<211> 245

<212> PRT

<213> Achromobacter xylosoxidans subsp. denitrificans

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35 40 45Ala Gln Gly Tyr Thr Phe Tyr Ala Ser Val Gly Asn Val Ser Asp Trp
50 55 60Glu Ser Thr Val Glu Ala Phe Glu Arg Val Lys Arg Asp Met Gly Pro
65 70 75 80Val Asp Val Leu Val Asn Asn Ala Gly Ile Thr Arg Asp Gly Leu Phe
85 90 95Arg Lys Met Ser Ala Asp Asp Trp Arg Ala Val Ile Asp Thr Asn Leu
100 105 110Asn Ser Leu Phe Asn Val Thr Lys Gln Val Ile Asp Asp Met Val Glu
115 120 125Arg Gln Trp Gly Arg Ile Val Asn Ile Ser Ser Val Asn Gly Gln Lys
130 135 140Gly Gln Phe Gly Gln Thr Asn Tyr Ser Thr Ala Lys Ala Gly Ile His
145 150 155 160Gly Phe Thr Met Ala Leu Ala Gln Glu Val Ala Ser Lys Gly Ile Thr
165 170 175Val Asn Thr Val Ser Pro Gly Tyr Ile Gly Thr Asp Met Val Arg Ala
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acc	tca	att	tgc	cag	cgc	ctg	gcc	aaa	gat	ggc	ttt	cgc	gtg	gtg	gca		96
Thr	Ser	Ile	Cys	Gln	Arg	Leu	Ala	Lys	Asp	Gly	Phe	Arg	Val	Val	Ala		
				20				25						30			
ggc	tgc	ggc	ccc	agc	cgc	aat	tac	cag	caa	tgg	ctg	gat	gaa	cag	gcg		144
Gly	Cys	Gly	Pro	Ser	Arg	Asn	Tyr	Gln	Gln	Trp	Leu	Asp	Glu	Gln	Ala		
				35			40							45			
gcg	cag	ggc	tat	acg	ttc	tac	gcg	tca	gtg	ggc	aac	gtg	tcc	gat	tgg		192
Ala	Gln	Gly	Tyr	Thr	Phe	Tyr	Ala	Ser	Val	Gly	Asn	Val	Ser	Asp	Trp		
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gag	tcc	acg	gta	gaa	gca	ttc	gag	cgc	gtc	aag	cg	gac	atg	ggc	ccg		240
Glu	Ser	Thr	Val	Glu	Ala	Phe	Glu	Arg	Val	Lys	Arg	Asp	Met	Gly	Pro		
	65				70				75					80			
gtc	gat	gtg	ctg	gtc	aac	aac	g	gc	gg	atc	acc	cgc	gac	ggc	ctg	ttc	288
Val	Asp	Val	Leu	Val	Asn	Asn	Ala	Gly	Ile	Thr	Arg	Asp	Gly	Leu	Phe		
				85				90						95			
cgc	aag	atg	agc	gcc	gac	gac	tgg	cgc	g	tc	atc	gac	acc	aac	ctg		336
Arg	Lys	Met	Ser	Ala	Asp	Asp	Trp	Arg	Ala	Val	Ile	Asp	Thr	Asn	Leu		
	100				105									110			
aac	agc	ctc	ttc	aac	gtg	acc	aag	cag	gtg	atc	gac	gac	atg	gtc	gag		384
Asn	Ser	Leu	Phe	Asn	Val	Thr	Lys	Gln	Val	Ile	Asp	Asp	Met	Val	Glu		
	115				120									125			
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Gly Gln Phe Gly Gln Thr Asn Tyr Ser Thr Ala Lys Ala Gly Ile His			
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ggc ttc acc atg gcg ctg gcg cag gaa gtg gcc agc aag ggc atc acg			528
Gly Phe Thr Met Ala Leu Ala Gln Glu Val Ala Ser Lys Gly Ile Thr			
165	170	175	
gtc aac acg gtg tcg ccg ggc tac atc ggc acg gac atg gtt cgc gcc			576
Val Asn Thr Val Ser Pro Gly Tyr Ile Gly Thr Asp Met Val Arg Ala			
180	185	190	
atc cgt ccg gac gtg ctg gaa aag atc gtc gcc acc att ccg gtg cgc			624
Ile Arg Pro Asp Val Leu Glu Lys Ile Val Ala Thr Ile Pro Val Arg			
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Arg Leu Gly Thr Pro Glu Glu Ile Ala Ser Ile Thr Ser Trp Leu Ala			
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Gly Leu His Met Gly			
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Trp Asp Ser Thr Lys Thr Ala Phe Asp Lys Val Lys Ser Glu Val Gly			
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Glu Val Asp Val Leu Ile Asn Asn Ala Gly Ile Thr Arg Asp Val Val			
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Phe Arg Lys Met Thr Arg Ala Asp Trp Asp Ala Val Ile Asp Thr Asn			

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Leu Thr Ser Leu Phe Asn Val Thr Lys Gln Val Ile Asp Gly Met Ala		
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Asp Arg Gly Trp Gly Arg Ile Val Asn Ile Ser Ser Val Asn Gly Gln		
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Lys Gly Gln Phe Gly Gln Thr Asn Tyr Ser Thr Ala Lys Ala Gly Leu		
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His Gly Phe Thr Met Ala Leu Ala Gln Glu Val Ala Thr Lys Gly Val		
165	170	175
Thr Val Asn Thr Val Ser Pro Gly Tyr Ile Ala Thr Asp Met Val Lys		
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Ala Ile Arg Gln Asp Val Leu Asp Lys Ile Val Ala Thr Ile Pro Val		
195	200	205
Lys Arg Leu Gly Leu Pro Glu Glu Ile Ala Ser Ile Cys Ala Trp Leu		
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Ser Ser Glu Glu Ser Gly Phe Ser Thr Gly Ala Asp Phe Ser Leu Asn		
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Gly Gly Leu His Met Gly		
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Thr Ala Ile Cys Gln Arg Leu Ala Lys Asp Gly Phe Arg Val Val Ala		
20	25	30
ggt tgc ggc ccc aac tcg ccg cgc gaa aag tgg ctg gag cag cag		144
Gly Cys Gly Pro Asn Ser Pro Arg Arg Glu Lys Trp Leu Glu Gln Gln		
35	40	45
aag gcc ctg ggc ttc gat ttc att gcc tcg gaa ggc aat gtg gct gac		192
Lys Ala Leu Gly Phe Asp Phe Ile Ala Ser Glu Gly Asn Val Ala Asp		
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Glu Val Asp Val Leu Ile Asn Asn Ala Gly Ile Thr Arg Asp Val Val				
85	90	95		
ttc cgc aag atg acc cgc gcc gac tgg gat gcg gtg atc gac acc aac				336
Phe Arg Lys Met Thr Arg Ala Asp Trp Asp Ala Val Ile Asp Thr Asn				
100	105	110		
ctg acc tcg ctg ttc aac gtc acc aag cag gtg atc gac ggc atg gcc				384
Leu Thr Ser Leu Phe Asn Val Thr Lys Gln Val Ile Asp Gly Met Ala				
115	120	125		
gac cgt ggc tgg ggc cgc atc gtc aac atc tcg tcg gtg aac ggg cag				432
Asp Arg Gly Trp Gly Arg Ile Val Asn Ile Ser Ser Val Asn Gly Gln				
130	135	140		
aag ggc cag ttc ggc cag acc aac tac tcc acc gcc aag gcc ggc ctg				480
Lys Gly Gln Phe Gly Gln Thr Asn Tyr Ser Thr Ala Lys Ala Gly Leu				
145	150	155	160	
cat ggc ttc acc atg gca ctg gcg cag gaa gtg gcg acc aag ggc gtg				528
His Gly Phe Thr Met Ala Leu Ala Gln Glu Val Ala Thr Lys Gly Val				
165	170	175		
acc gtc aac acg gtc tct ccg ggc tat atc gcc acc gac atg gtc aag				576
Thr Val Asn Thr Val Ser Pro Gly Tyr Ile Ala Thr Asp Met Val Lys				
180	185	190		
gcg atc cgc cag gac gtg ctc gac aag atc gtc gcg acg atc ccg gtc				624
Ala Ile Arg Gln Asp Val Leu Asp Lys Ile Val Ala Thr Ile Pro Val				
195	200	205		
aag cgc ctg ggc ctg ccg gaa gag atc gcc tcg atc tgc gcc tgg ttg				672
Lys Arg Leu Gly Leu Pro Glu Glu Ile Ala Ser Ile Cys Ala Trp Leu				
210	215	220		
tcg tcg gag gag tcc ggt ttc tcg acc ggc gcc gac ttc tcg ctc aac				720
Ser Ser Glu Glu Ser Gly Phe Ser Thr Gly Ala Asp Phe Ser Leu Asn				
225	230	235	240	
ggc ggc ctg cat atg ggc tga				741
Gly Gly Leu His Met Gly				
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